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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,347	07/18/2003	Richard Daniel Colvin	2376.0017	5026

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MERCHANT & GOULD PC
P.O. BOX 2903
MINNEAPOLIS, MN 55402-0903

EXAMINER	
THANGAVELU, KANDASAMY	
ART UNIT	**PAPER NUMBER**
2123	

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/623,347	COLVIN ET AL.	
	Examiner	Art Unit	
	Kandasamy Thangavelu	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 April 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-9,11,17 and 18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-9,11,17 and 18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/15/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is in response to the Applicants' amendment dated April 6, 2005. Claims 1, 3, 5, 7, 9, 11, 13, 15 and 17 were amended. Claims 4, 10 and 16 were canceled. Claims 1-3, 5-9, 11-15 and 17-18 of the application are pending. This office action is made final.

Specification

2. The disclosure is objected to because of the following informalities:

In Page 7, Para 027, "to include the necessary functionality and computing capabilities to implement the automated target select and platform generation methodology" appears to be incorrect and it appears that it should be, "to include the necessary functionality and computing capabilities to implement the automated target selection and platform generation methodology".

In amended Para 032, Lines 6 and 9, "U.S. Patent Application No. 09/622,976" is incorrect and it should be "U.S. Patent Application No. 10/622,976".

In amended Para 048, Lines 5-6 and 8-9, "U.S. Patent Application No. 09/622,976" is incorrect and it should be "U.S. Patent Application No. 10/622,976".

In amended Para 052, Lines 4-5, "U.S. Patent Application No. 09/622,976" is incorrect and it should be "U.S. Patent Application No. 10/622,976".

Appropriate corrections are required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 3, 9 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3, 9, and 15 state in part, "wherein the at least one of a maximum target limit is determined by applying at least one multiplier to approximate an average number of targets to assign to each of the additional platform locations and receiving a user-supplied number of slots for each of the additional platform locations". It does not state what the multiplier is and how it approximates the average number of targets to assign. The use of a user-supplied number of slots for each of the additional platform locations is also not understood. Therefore these claims are vague and indefinite.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5.1 Method claims 1-6 are rejected for reciting a method that is not directed to the technological arts.

Regarding claim 1, this claim is directed at a method of generating optimized platform location sets. The claim specifies performing some calculations on already available data and making some decision based on the results. None of the limitations describe any type of computer-implemented steps. To be statutory, the utility of an invention must be within the technological arts. *In re Musgrave*, 167 USPQ 280, 289-90 (CCPA, 1970). The definition of "technology" is the "application of science and engineering to the development of machines and procedures in order to enhance or improve human conditions, or at least to improve human efficiency in some respect." (Computer Dictionary 384 (Microsoft Press, 2d ed. 1994)).

Dependent claims 2-6 depend on Claim 1 but do not add further statutory steps.

The limitations recited in claims 1-6 contain no language suggesting these claims are intended to be within the technological arts.

5.2 Claims 1- 6 would be statutory if claim 1 is written as a computer implemented method of generating optimized platform location sets.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

7. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1-3, 7-9 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Cullick et al.** (U.S. Patent 6,549,879) in view of **Brunet** (U.S. Patent 6,315,054), and further in view of **Tubel et al.** (U.S. Patent 6,006,832).

8.1 **Cullick et al.** teaches determining optimal well locations from a 3D reservoir model. Specifically as per claim 13, **Cullick et al.** teaches computer system, comprising a user interface, memory storage means, and a processor coupled to the user interface and the memory storage means (CL6, L30-32; CL7, L54-56). **Cullick et al.** teaches determining an optimum location for each well location in the set of well locations (the wells are located to optimize the desired property of the reservoir that is related to the hydrocarbon productivity; CL1, L20-22).

Cullick et al. teaches evaluating a small subset of well site combinations and selecting those with the highest value of the desired productivity metric e.g. net pay or permeability

thickness (CL1, L35-40); searching a large number of candidate trajectories from platform locations with a preset radius, inclination angle, well length, and azimuth; each well trajectory is analyzed with respect to net pay (CL2, L38-42); modeling the spatial configuration constraints-minimum well spacing, maximum well length, maximum number of wells, distance to platforms (CL4, L60-65). **Cullick et al.** does not expressly teach the processor operable to select a set of surface platform locations and determine additional surface platform locations to add to the set of surface platform locations. **Brunet** teaches the processor operable to select a set of surface platform locations and determine additional surface platform locations to add to the set of surface platform locations (CL2, L19-20), because that allows increasing production and maximizing ultimate recovery of hydrocarbons from the reservoirs, while lowering the cost (CL2, L3-5); and reducing the number of platforms resulting in reduced investment and lower operating costs (CL2, L19-20). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the computer system of **Cullick et al.** with the computer system of **Brunet** that included the processor operable to select a set of surface platform locations and determine additional surface platform locations to add to the set of surface platform locations. The artisan would have been motivated because that would allow increasing production and maximizing ultimate recovery of hydrocarbons from the reservoirs, while lowering the cost; and reducing the number of platforms resulting in reduced investment and lower operating costs.

Cullick et al. does not expressly teach the processor operable to determining an optimum surface location for each surface platform location in the set of surface platform locations. **Tubel et al.** teaches that each platform has associated therewith a plurality of wells which extend from each platform through water to the surface of the ocean floor (CL5, L64-66),

because as per **Brunet** that allows increasing production and maximizing ultimate recovery of hydrocarbons from the reservoirs, while lowering the cost (CL2, L3-5); and reducing the number of platforms resulting in reduced investment and lower operating costs (CL2, L19-20). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the computer system of **Cullick et al.** with the computer system of **Tubel et al.** that included each platform having associated therewith a plurality of wells which extend from each platform through water to the surface of the ocean floor. The artisan would have been motivated because that would allow increasing production and maximizing ultimate recovery of hydrocarbons from the reservoirs, while lowering the cost; reducing the number of platforms resulting in reduced investment and lower operating costs.

Brunet teaches the processor operable to determining an optimum surface location for each surface platform location in the set of surface platform locations (CL2, L19-20), because that allows increasing production and maximizing ultimate recovery of hydrocarbons from the reservoirs, while lowering the cost (CL2, L3-5); and reducing the number of platforms resulting in reduced investment and lower operating costs (CL2, L19-20). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the computer system of **Cullick et al.** with the computer system of **Brunet** that included the processor operable to determining an optimum surface location for each platform location in the set of surface platform locations. The artisan would have been motivated because that would allow increasing production and maximizing ultimate recovery of hydrocarbons from the reservoirs, while lowering the cost; and reducing the number of platforms resulting in reduced investment and lower operating costs.

In addition, **Smitherman** (U.S. Patent 5,975,207) teaches that a number of wells are supported from a single platform and ways are provided for reaching furthermost areas of production pay zone (CL1, L37-40; CL2, L30-32). **Stinessen** (U.S. Patent 5,398,762) teaches that the number of platforms that are necessary to drain the hydrocarbons may be reduced with the aim of reducing costs (CL1, L58-60; CL1, L55). **Nish et al.** (U.S. Patent Application 2003/0150618) teaches that thousand of feet of the risers exert substantial downward pressure on the buoyancy system; deeper the drilling moves, the risers become exceedingly heavy; it is advantageous to optimize the systems for accessing deep reserves to reduce the weight of the risers and platforms (Para 0061, L1-10). **Middya** (U.S. Patent Application 2002/0165671) teaches producing from a plurality of wells and reservoirs coupled to a limited number of surface facilities, to enhance use of the facilities and production from the reservoirs (Para 0002, L4-7); and it is economically advantageous to couple a substantial number of wells from a plurality of different reservoirs to a single set of surface facilities (Para 0004, L16-18).

8.2 As per claim 14, **Cullick et al., Brunet** and **Tubel et al.** teach the computer system of claim 13. **Cullick et al.** teaches the processor determines the additional well locations by validating the additional well locations (CL5, L40-45; CL6, L32-36). **Cullick et al.** does not expressly teach that the processor determines the additional platform locations by validating the additional platform locations. **Brunet** teaches the processor operable to determining an optimum location for each platform location in the set of platform locations (CL2, L19-20), because that allows increasing production and maximizing ultimate recovery of hydrocarbons from the

reservoirs, while lowering the cost (CL2, L3-5); and reducing the number of platforms resulting in reduced investment and lower operating costs (CL2, L19-20). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the computer system of **Cullick et al.** that included the processor determining the additional well locations by validating the additional well locations with the computer system of **Brunet** that included the processor operable to determining an optimum location for each platform location in the set of platform locations. The artisan would have been motivated because that would allow increasing production and maximizing ultimate recovery of hydrocarbons from the reservoirs, while lowering the cost; and reducing the number of platforms resulting in reduced investment and lower operating costs.

8.3 As per claim 15, **Cullick et al., Brunet** and **Tubel et al.** teach the computer system of claim 13. **Cullick et al.** teaches the processor determines the additional target locations to add to the set of target locations by adding the additional target locations to the set and determining whether the additional target locations are desirable, based on at least one of a maximum target limit (CL4, L63), a drilling distance (CL4, L64-65), and one or more target values associated with the additional platform locations (CL1, L35-40; CL4, L3-7; CL4, L53-57); wherein the at least one of a maximum target limit is determined by applying at least one multiplier to approximate an average number of targets to assign to each of the additional platform locations and receiving a user-supplied number of slots for each of the additional platform locations (CL4, L63); each target comprising a drilling location for a well (CL1, L10), and wherein the one or more target values comprise numerical values associated with the distribution of a property of

interest associated with each target, the property of interest including at least one of porosity and oil saturation (CL1, L35-40; CL4, L3-7; CL4, L53-57).

Cullick et al. does not expressly teach the processor determines the additional platform locations to add to the set of platform locations by adding the additional platform locations to the set and determining whether the additional platform locations are desirable, based on at least one of a maximum target limit, a drilling distance, and one or more target values associated with the additional platform locations. **Brunet** teaches the processor determines the additional platform locations to add to the set of platform locations by adding the additional platform locations to the set and determining whether the additional platform locations are desirable, based on increasing production and maximizing ultimate recovery (CL2, L3-5) and reducing the number of platforms (CL2, L19-20), because that allows increasing production and maximizing ultimate recovery of hydrocarbons from the reservoirs, while lowering the cost (CL2, L3-5); and reducing the number of platforms resulting in reduced investment and lower operating costs (CL2, L19-20). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the computer system of **Cullick et al.** that included the processor determining the additional target locations to add to the set of target locations by adding the additional target locations to the set and determining whether the additional target locations are desirable, based on at least one of a maximum target limit, a drilling distance, and one or more target values associated with the additional platform locations with the computer system of **Brunet** that included the processor determining the additional platform locations to add to the set of platform locations by adding the additional platform locations to the set and determining whether the

additional platform locations are desirable, based on reducing the number of platforms. The artisan would have been motivated because that would allow increasing production and maximizing ultimate recovery of hydrocarbons from the reservoirs, while lowering the cost; reducing the number of platforms resulting in reduced investment and lower operating costs.

8.4 As per Claims 1-3 and 7-9, these are rejected based on the same reasoning as Claims 13-15, supra. Claims 1-3 and 7-9 are method and computer readable medium claims reciting the same limitations as Claims 13-16 as taught throughout by **Cullick et al., Brunet** and **Tubel et al.**

9. Claims 5-6, 11-12 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Cullick et al.** (U.S. Patent 6,549,879) in view of **Brunet** (U.S. Patent 6,315,054), and further in view of **Tubel et al.** (U.S. Patent 6,006,832) and **Lo et al.** (U.S. Patent 5,757,663).

9.1 As per claim 17, **Cullick et al., Brunet** and **Tubel et al.** teach the computer system of claim 13. **Cullick et al.** teaches setting a step-out distance equal to a fraction of a platform reach (CL2, L38-42); and moving each of the additional target locations, and if a new location is better than an original location, moving each of the additional target locations to a new location (CL1, L20-22; CL1, L35-40; CL1, L29-32; CL2, L38-42; CL4, L63-65); and the determination that a new location is better than an original location comprises determining at least one of the following:

determining that more targets may be reached from the new location than from the original location (CL4, L63), each target representing drilling location for a well (CL1, L10);

determining that the same number of targets may be reached from the new location with less total distance (CL4, L64-65); and

determining that the number of targets reachable from the new location have a higher cumulative target value (CL1, L35-40).

Cullick et al. does not expressly teach moving each of the additional platform locations, and if a new location is better than an original location, moving each of the additional platform locations to a new location. **Brunet** teaches moving each of the additional platform locations, and if a new location is better than an original location, moving each of the additional platform locations to a new location based on increasing production and maximizing ultimate recovery (CL2, L3-5) and reducing the number of platforms (CL2, L19-20), because that allows increasing production and maximizing ultimate recovery of hydrocarbons from the reservoirs, while lowering the cost (CL2, L3-5); and reducing the number of platforms resulting in reduced investment and lower operating costs (CL2, L19-20). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the computer system of **Cullick et al.** with the computer system of **Brunet** that included moving each of the additional platform locations, and if a new location is better than an original location, moving each of the additional platform locations to a new location. The artisan would have been motivated because that would allow increasing production and maximizing ultimate recovery of hydrocarbons from

the reservoirs, while lowering the cost; and reducing the number of platforms resulting in reduced investment and lower operating costs.

Cullick et al. does not expressly teach (b) moving each of the additional platform locations in the set in eight compass directions;

(c) executing step (b) until new locations for each of the additional platform locations are no longer achieved; and

(d) executing steps (a) through (c) progressively decreasing the step-out distance until a more desirable set of platform locations are no longer achieved.

Lo et al. teaches (b) moving each of the additional platform locations in the set in eight compass directions;

(c) executing step (b) until new locations for each of the additional platform locations are no longer achieved; and

(d) executing steps (a) through (c) progressively decreasing the step-out distance until a more desirable set of platform locations are no longer achieved (Fig 6, Fig 8; CL1, L8-13; CL1, L45-50; CL1, L54 to CL2, L10), because that allows reducing the number of platforms resulting in reduced investment and lower operating costs (CL2, L19-20). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the computer system of **Cullick et al.** with the computer system of **Lo et al.** that included (b) moving each of the additional platform locations in the set in eight compass directions;

(c) executing step (b) until new locations for each of the additional platform locations are no longer achieved; and

(d) executing steps (a) through (c) progressively decreasing the step-out distance until a more desirable set of platform locations are no longer achieved. The artisan would have been motivated because that would allow reducing the number of platforms resulting in reduced investment and lower operating costs.

In addition, **Smitherman** (U.S. Patent 5,975,207) teaches that a number of wells are supported from a single platform and ways are provided for reaching furthermost areas of production pay zone (CL1, L37-40; CL2, L30-32). **Stinessen** (U.S. Patent 5,398,762) teaches that the number of platforms that are necessary to drain the hydrocarbons may be reduced with the aim of reducing costs (CL1, L58-60; CL1, L55). **Nish et al.** (U.S. Patent Application 2003/0150618) teaches that thousand of feet of the risers exert substantial downward pressure on the buoyancy system; deeper the drilling moves, the risers become exceedingly heavy; it is advantageous to optimize the systems for accessing deep reserves to reduce the weight of the risers and platforms (Para 0061, L1-10). **Middya** (U.S. Patent Application 2002/0165671) teaches producing from a plurality of wells and reservoirs coupled to a limited number of surface facilities, to enhance use of the facilities and production from the reservoirs (Para 0002, L4-7); and it is economically advantageous to couple a substantial number of wells from a plurality of different reservoirs to a single set of surface facilities (Para 0004, L16-18).

Per claim 18: **Cullick et al.** teaches the processor reduces the step-out distance by a predetermined amount for each execution of Step (d) (CL2, L38-42).

9.2 As per Claims 5-6 and 11-12, these are rejected based on the same reasoning as Claims 17-18, supra. Claims 5-6 and 11-12 are method and computer readable medium claims reciting the same limitations as Claims 17-18, as taught throughout by **Cullick et al., Brunet, Tubel et al.** and **Lo et al.**

Response to Arguments

10. Applicants' arguments with respect to 35 USC 103 (a) rejections filed on April 6, 2005 have been considered. Applicants' arguments with respect to 35 USC 103 (a) rejections are not persuasive.

10.1 As per the applicants' argument that "Cullick fails to teach selecting a set of surface platform locations or determining additional surface platform locations to add to the set of surface platform locations; Cullick further fails to teach determining an optimum surface location for each surface platform location in the set of surface platform locations since this determination must include any previously determined additional surface platform locations; Cullick fails to teach determining additional surface platform locations", the examiner respectfully disagrees.

Cullick et al. teaches evaluating a small subset of well site combinations and selecting those with the highest value of the desired productivity metric e.g. net pay or permeability thickness (CL1, L35-40); searching a large number of candidate trajectories from platform locations with a preset radius, inclination angle, well length, and azimuth; each well trajectory is

analyzed with respect to net pay (CL2, L38-42); modeling the spatial configuration constraints-minimum well spacing, maximum well length, maximum number of wells, distance to platforms (CL4, L60-65). **Brunet** teaches the processor operable to select a set of surface platform locations and determine additional surface platform locations to add to the set of surface platform locations (CL2, L19-20), because that allows increasing production and maximizing ultimate recovery of hydrocarbons from the reservoirs, while lowering the cost (CL2, L3-5); and reducing the number of platforms resulting in reduced investment and lower operating costs (CL2, L19-20).

10.2 As per the applicants' argument that "Brunet fails to teach, disclose, or suggest determining additional surface platform locations to add to a set of surface platform locations", the examiner respectfully disagrees. Applicants' attention is directed to Paragraph 10.1 above.

10.3 As per the applicants' argument that "Tubel, fails to teach, disclose, or suggest determining additional surface platform locations to add to a set of surface platform locations and determining an optimum surface location for each surface platform location in the set of surface platform locations", the examiner directs Applicants' attention to Paragraph 10.1 above.

10.4 As per the applicants' argument that "dependent claims 3, 9 and 15 specify that determining additional platform locations to add to the set of platform locations includes adding the additional platform locations to the set and determining whether the additional platform locations are desirable, based on at least one of a maximum target limit, a drilling distance, and

one or more target values associated with the additional platform locations, wherein the maximum target limit represents a maximum number of drilling locations which are reachable by the additional platform locations and the one or more target values comprise numerical values associated with the distribution of a property of interest associated with the drilling locations, the property of interest including at least one of porosity and oil saturation;.... none of the cited references teach, suggest or disclose the aforementioned features", the examiner respectfully disagrees.

Cullick et al. teaches the processor determines the additional target locations to add to the set of target locations by adding the additional target locations to the set and determining whether the additional target locations are desirable, based on at least one of a maximum target limit (CL4, L63), a drilling distance (CL4, L64-65), and one or more target values associated with the additional platform locations (CL1, L35-40; CL4, L3-7; CL4, L53-57); wherein the at least one of a maximum target limit is determined by applying at least one multiplier to approximate an average number of targets to assign to each of the additional platform locations and receiving a user-supplied number of slots for each of the additional platform locations (CL4, L63); each target comprising a drilling location for a well (CL1, L10), and wherein the one or more target values comprise numerical values associated with the distribution of a property of interest associated with each target, the property of interest including at least one of porosity and oil saturation (CL1, L35-40; CL4, L3-7; CL4, L53-57).

10.5 As per the applicants' argument that "Lo fails teach any of the features of claims 1, 7, and 13", the examiner has use **Lo** for teaching (b) moving each of the additional platform locations in the set in eight compass directions;

(c) executing step (b) until new locations for each of the additional platform locations are no longer achieved; and

(d) executing steps (a) through (c) progressively decreasing the step-out distance until a more desirable set of platform locations are no longer achieved (Fig 6, Fig 8; CL1, L8-13; CL1, L45-50; CL1, L54 to CL2, L10).

Conclusion

ACTION IS FINAL – NECESSIATED BY AMENDMENT

11. Applicants' amendments necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kandasamy Thangavelu whose telephone number is 571-272-3717. The examiner can normally be reached on Monday through Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard, can be reached on 571-272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC 2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

K. Thangavelu
Art Unit 2123
July 12, 2005

Paul L. Rodriguez 7/20/05
Primary Examiner
Art Unit 2125